

Title (en)
FATIGUE LIMIT STRESS SPECIFICATION SYSTEM, FATIGUE LIMIT STRESS SPECIFICATION DEVICE, AND FATIGUE LIMIT STRESS SPECIFICATION METHOD

Title (de)
SYSTEM ZUR SPEZIFIKATION DER ERMÜDUNGSGRENBELASTUNG, VORRICHTUNG ZUR SPEZIFIKATION DER ERMÜDUNGSGRENBELASTUNG UND VERFAHREN ZUR SPEZIFIKATION DER ERMÜDUNGSGRENBELASTUNG

Title (fr)
SYSTÈME DE SPÉCIFICATION DE CONTRAINTE DE LIMITE DE FATIGUE, DISPOSITIF DE SPÉCIFICATION DE CONTRAINTE DE LIMITE DE FATIGUE ET PROCÉDÉ DE SPÉCIFICATION DE CONTRAINTE DE LIMITE DE FATIGUE

Publication
EP 3546919 A4 20200115 (EN)

Application
EP 17888692 A 20170822

Priority
• JP 2016251885 A 20161226
• JP 2017029846 W 20170822

Abstract (en)
[origin: EP3546919A1] A fatigue limit stress specification system includes: a vibration generator that repeatedly applies a load to an object to be measured; a temperature sensor that measures a change in temperature of the object to be measured; and an information processing device that measures a fatigue limit stress of the object to be measured on the basis of the change in temperature of the object to be measured that has been measured by the temperature sensor. The information processing device analyzes the change in temperature that has been measured by the temperature sensor, obtains a relation between a temperature amplitude of a fundamental frequency component of vibration for the object to be measured and a temperature amplitude of a second harmonic component of the vibration, performs fitting on the relation by using first approximate line (L1) and second approximate line (L2), first approximate line (L1) including a quadratic curve, second approximate line (L2) including a quadratic curve, and obtains the fatigue limit stress of the object to be measured based on an intersection of first approximate line (L1) and second approximate line (L2).

IPC 8 full level
G01N 3/34 (2006.01); **G01N 3/06** (2006.01); **G01N 3/32** (2006.01)

CPC (source: EP US)
G01N 3/06 (2013.01 - EP); **G01N 3/18** (2013.01 - US); **G01N 3/32** (2013.01 - EP US); **G01N 3/34** (2013.01 - EP US); **G01N 3/36** (2013.01 - US); **G01N 2203/0073** (2013.01 - EP US); **G01N 2203/0222** (2013.01 - US)

Citation (search report)
• [XD] JP 2016024056 A 20160208 - PANASONIC CORP
• [A] DAVID FRAUX ET AL: "Etude par thermographie infrarouge des échangesthermiques d'une éprouvette au cours d'un essai de fatigue cyclique", 31 December 2009 (2009-12-31), pages 1 - 6, XP009139308, Retrieved from the Internet <URL:http://www.sft.asso.fr/Local/sft/dir/user-3775/documents/actes/congres_2009/Communications/127.pdf> [retrieved on 20191205]
• See also references of WO 2018123129A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
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DOCDB simple family (publication)
EP 3546919 A1 20191002; EP 3546919 A4 20200115; CN 110100164 A 20190806; JP 2018105709 A 20180705; JP 6735508 B2 20200805; US 11275005 B2 20220315; US 2019310174 A1 20191010; WO 2018123129 A1 20180705

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EP 17888692 A 20170822; CN 201780079633 A 20170822; JP 2016251885 A 20161226; JP 2017029846 W 20170822; US 201916449777 A 20190624